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BIRTH WEIGHT AND NUTRITIONAL STATUS IN PRESCHOOL CHILDREN

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Background: The intrauterine period has been considered as a very sensitive period in which nutritional and/or hormone changes appear to play an essential role in the subsequent control of body weight.

Objectives: To classify the nutritional status of children, analyzing its relationship with birth weight.

Methods: Cross-sectional/observational study comprising 1424 preschool children, average age 4.58 years old (SD=0,990), residents in the centre/north region of Portugal. The children's anthropometric measurement was obtained and the classification was based on the NCHS reference (CDC, 2000) and the birth weight classification on the WHO (2001).

Results: Globally 60.0% had normal weight, 38.2% were overweight (including 17.5% obesity) and 1.8% low-weight but the differences shown to be independent from age and gender. 89.0% of girls and 87.6% of boys were born with appropriate weight for gestational age while 7.8% and 4.0% were born respectively lightweight and large for gestational age. The association between birth weight and overweight revealed that 11.5% of children with overweight were born large. The relationship was statistically significant ($\chi^2 = 15.265$; $p = 0.018$), implying that a higher birth weight was associated with increased risk of overweight in childhood with a probability greater than 2 times (OR = 2.001; 95% CI = 1.195 to 3.352) ($\chi^2 = 7.215$; $p = 0.007$).

Conclusion: The results suggest significant effect of birth weight on the development of later overweight. So, children born with high weight require further monitoring and promotion of an adequate dietary pattern, in order to control early its nutritional status.

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